(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property **Organization**

International Bureau





(43) International Publication Date 14 October 2004 (14.10.2004)

PCT

(10) International Publication Number WO 2004/086994 A1

(51) International Patent Classification7:

A61B 18/14

(74) Agent: MORRIS, James, H.; Wolf, Greenfield & Sacks, P.C., 600 Atlantic Avenue, Boston, MA 02210 (US).

(21) International Application Number:

PCT/US2004/009619

(22) International Filing Date: 29 March 2004 (29.03.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/458,491 28 March 2003 (28.03.2003) US 60/458,489 28 March 2003 (28.03.2003) US 60/458,490 28 March 2003 (28.03.2003) US 60/458,643 28 March 2003 (28.03.2003) US 60/458,856 28 March 2003 (28.03.2003) US

- (71) Applicant (for all designated States except US): C.R. BARD, INC. [US/US]; 730 Central Avenue, Murray Hill, NJ 07974 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): SAGON, Stephen, W. [US/US]; 129 Mack Hill Road, Amherst, NH 03031 (US). STEVENS-WRIGHT, Debbie [US/US]; 175 Candlestick Road, North Andover, MA 01845 (US). MOR-GAN, John [GB/GB]; Wessex Cardiac Center, Southampton University Hosp, ital, E level, Room 133A, Trmona Road Southampton S016 6YD (GB).

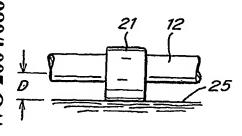
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
 - MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHOD AND APPARATUS FOR ELECTROSURGICAL ABLATION



(57) Abstract: Methods and apparatus for tissue ablation procedures are disclosed. An ablation electrode may be disposed on a catheter shaft, the ablation electrode having a width in cross-section that is larger than a cross-sectional width of the shaft to space the shaft from a tissue surface. The electrode may be eccentrically shaped or eccentrically mounted on a catheter shaft. Changing the orientation of the electrode may change the distance between the shaft and the tissue surface. An ablation electrode may be spaced at a distance from the tissue surface and configured to have the distance be adjustable. An ablation electrode with more mass and/or surface area on one side of the shaft also may be provided.

